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OUTLOOK FOR JANUARY TO MARCH 2012

HIGHLIGHTS

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Outlook Highlights

- Normal to above – normal rainfall is expected over the continental SADC countries.
- Most of Madagascar is expected to receive above-normal to normal total rainfall
- Heavy rainfall is forecast and is expected to bring relief to the dryness across southern Africa during the last next week of December 2011.
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Summary of the current rainy season

There has been largely below-normal rains over most of the region. The diminished rainfall performance has resulted in deficits in many areas of the region. Localized heavy rains were, however, recorded over same parts in the subregion since the commencement of the season.

Meantime, the outlook for January to March 2012 is for mostly normal to above-normal rains over the greater parts of the region. This is consistent with SARCOF-15. However, the intensity will be largely less pronounced in contiguous SADC but improved in DRC. Details of the forecast are on pages 3 and 4.

EL-NIÑO /LA NINA UPDATE

- Persistence of negative SST anomalies in the tropical Pacific.
- Models project persistent weak La Nina condition during the early 2012.

El Nino -Southern Oscillation

- As of mid-December 2011, SST anomalies remain in weak to moderate La Niña territory in the central and eastern equatorial Pacific.
- A majority of the models predict a weak or moderate strength La Niña to continue through the beginning of the year.
- The current observation, in combination with the model forecasts, favors a weak-to-moderate strength La Niña during the JFM period.

During November 2011, below-average sea surface temperatures (SSTs) associated with La Niña conditions continued across the eastern and central equatorial Pacific Ocean (Fig. 1). The recent weekly SST indices in the Niño-3.4 and Niño-3 regions maintained levels near -1.0°C , indicative of weak to moderate La Niña (Fig.2)

The oceanic heat content (average temperature in the upper 300m of the ocean) weakened slightly, but still indicates a large area of below-average temperatures at depth in the eastern Pacific. Also reflecting La Niña, the atmospheric circulation over the global tropics featured anomalous low-level easterly and upper-level westerly winds in the central and west-central Pacific.

Collectively, these oceanic and atmospheric patterns are consistent with the continuation of La Niña conditions.

ECMWF Seasonal Forecast
Mean forecast SST anomaly
Forecast start reference is 01/12/11
Ensemble size = 51, climate size = 450

System 4
JFM 2012

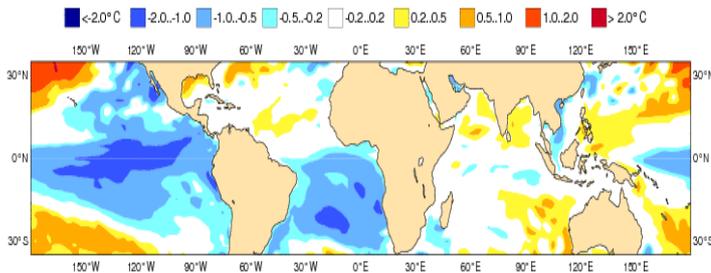


Fig 1. Mean global oceans SST anomalies for JFM 2012 period (Source: ECMWF)

Performance of the rainy season

An analysis of the cumulative rainfall during the past ninety days reveals strong rainfall deficits over many portions of SADC region such as in northern Angola, extreme southern DRC, South Africa, eastern Zambia, Mozambique, and Madagascar.

Meanwhile, above normal rainfall were also recorded across the northeastern of Tanzania, some parts of Zimbabwe and some portions of Botswana.

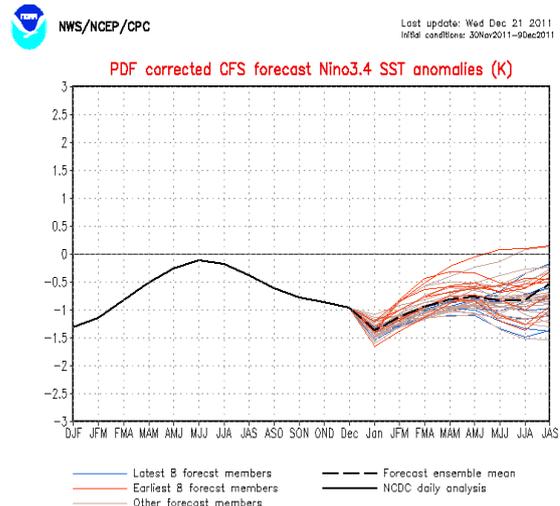


Fig.2: Model ENSO forecast (Source: NOAA)

In the last week of December 2011, seasonal wind convergence in the Congo basin region, and the interaction between eastward propagating mid-latitude and tropical systems across southern and southeastern Africa are expected to enhance rainfall across conterminous SADC. Thus there is increased chance for heavy rainfall over southern DRC, northeastern Angola, half eastern Namibia, Botswana, South Africa central parts of Tanzania and Zimbabwe (Fig.3).

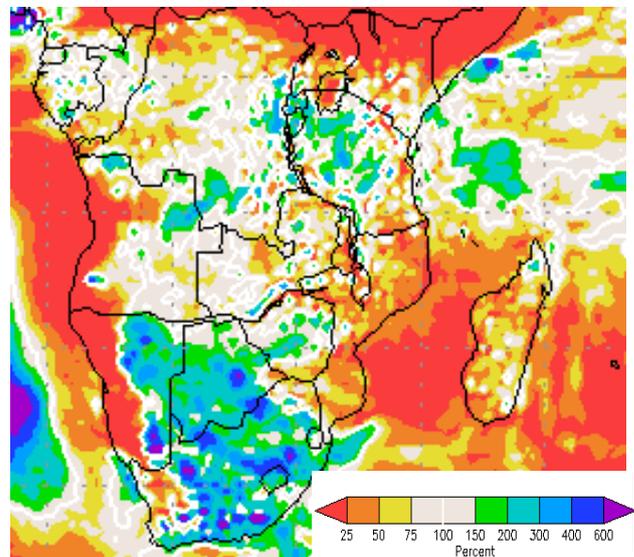


Fig. 3. Precipitation (percent of normal) 22 December to 29 December 2011 (Source: COLA/IGES)

LA NINA 2011/2012 BEST ANALOGUE YEAR

Many La Niña years were similar to the trend of the current conditions. The chaotic nature of the atmosphere ensures these trends may not always remain identical.

However, this variability gives an indication of the atmosphere state expected when the conditions are comparable. The analogue year analysis for JFM 2012 period is most comparable with JFM 1972 period for the bulk of the SADC region. This resulted in largely normal condition (80-120%).

The JFM 1972 pattern is shown in Fig. 4. 1972 La Niña most closely corresponds the trend of current conditions.

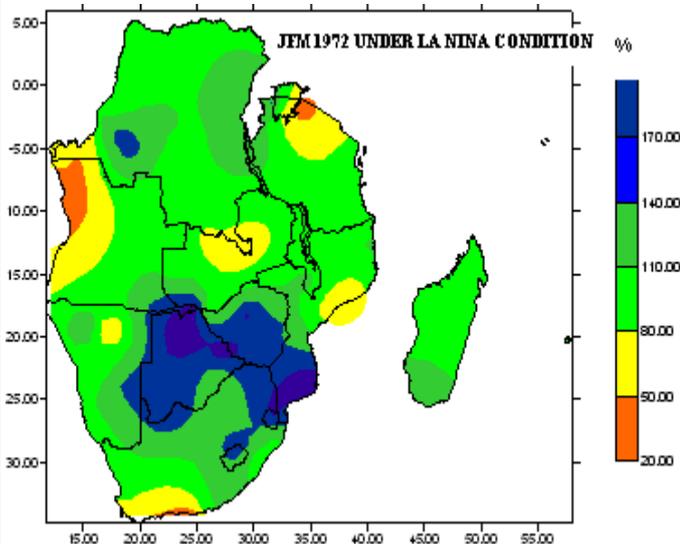


Fig 4. JFM 1972 (percent of Normal) analogue year for JFM 2012 period under La Niña conditions

THIRTY—YEAR MEAN RAINFALL (1970—2000) FOR JANUARY TO MARCH

For JFM period the rainfall pattern is largely spread from the southwest to the northeast with the maxima of over 600 millimeters spreading from northwest to the eastern coast. Over Madagascar, the maximum is along the central areas. Mauritius also has amounts greater than 600 millimeters.

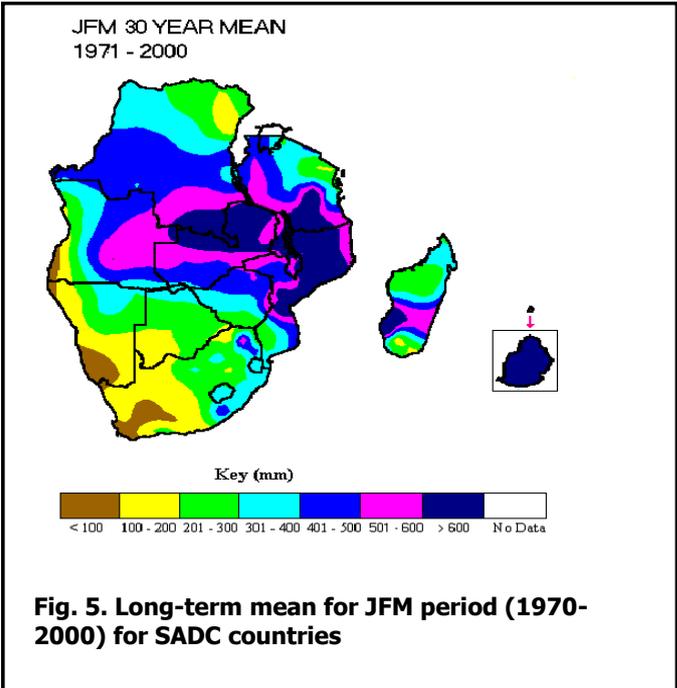


Fig. 5. Long-term mean for JFM period (1970-2000) for SADC countries

The forecast mostly normal to above-normal conditions imply that the expected rainfall is going to be around the long-term mean.

JANUARY TO MARCH 2012 OUTLOOK UPDATE

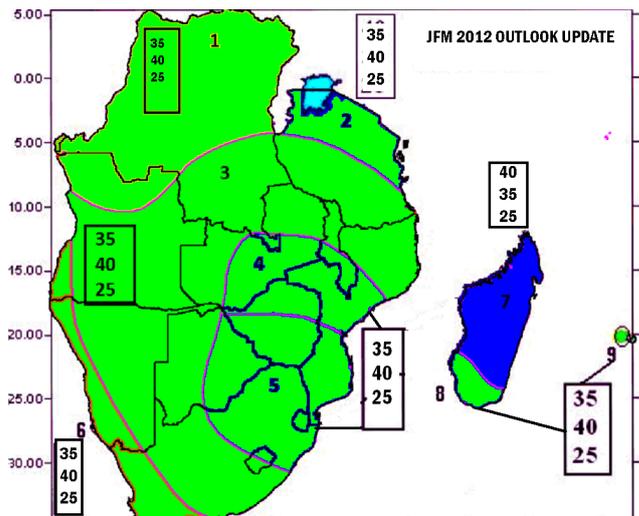


Fig 6. SADC rainfall outlook for January to March 2012

RAINFALL FORECAST (JANUARY –MARCH 2012)

FORECAST DETAILS

Zone 1: (Most of DRC and northernmost Angola).

Increased chances of normal to above normal rainfall

Zone 2: (North-eastern half of Tanzania).

Increased chances of normal to above normal rainfall

Zone 3: (Central South Africa, south-western half of Lesotho, western half of Botswana,).

Increased chances of normal to above normal rainfall

Zone 4: (Central parts of Mozambique, northern half of Zimbabwe, central parts of Zambia, extreme south of DRC, and southern half of Malawi).

Increased chances of normal to above normal rainfall

Zone 5: (North-eastern half of Lesotho, north-eastern parts of South Africa, Swaziland, eastern half of Botswana, southern half of Zimbabwe and southern Mozambique).

Increased chances of normal to above normal rainfall

Zone 6: (Extreme south coastal of South Africa, western coastal areas of Namibia and extreme south-eastern parts of Angola)

Increased chances of normal to above normal rainfall

Zone 7: (Most of Madagascar).

Increased chances of above-normal to normal rainfall

Zone 8: Southernmost Madagascar.

Increased chances of normal to above-normal rainfall

Zone 9: Mauritius.

Increased chances of normal to above-normal rainfall

HAPPY HOLIDAYS

Map caption

The number for each zone indicate the probabilities of rainfall in each of the three categories: Above normal, Normal and Below normal (Fig. 6). The top number indicates the probability of rainfall occurring in the Above-normal category, the middle number for Normal and the bottom number for Below-normal. For example, in the case of Zone IV there is a 35% probability for rainfall occurring in the above-normal category; a 40% probability for rainfall in the normal category; and 25% probability for rainfall for a below-normal category. It is emphasized that boundaries between zones should be considered as transition zones.

Note: This update is relevant only for three monthly time scales and relatively large areas. Local to month to month variations may occur.

The users are strongly advised to contact their NMHSs and SADC Climate Services centre for interpretation of this Outlook, finer details, updates and additional guidance.

Acknowledgements:

SADC NMHSs, Global climate monitoring and prediction centres, climate research institutions, and WMO.

SADC CSC in conjunction with other partners will continue to closely monitor the status